

What is claimed is:

1. A method for calibrating cameras comprising :
moving a point of light on a flat surface;

generating a first frame of said point of light in a first field of view of a first camera;

generating a second frame of said point of light in a second field of view of a second camera; and

determining a relative position between said first camera and said second camera based at least in part on said first and said second frames.
2. The method according to claim 1, wherein said first field of view and said second field of view do not overlap.
3. The method according to claim 1, wherein said determination of relative position is based at least in part on two frames.
4. The method according to claim 3, wherein said two frames are four frames.
5. The method according to claim 1, wherein said point of light does not appear in said fields of view simultaneously.

6. The method according to claim 1, wherein said overlap is less than 100 %.
7. The method according to claim 1, wherein said flat surface is selected from the group consisting of a floor, a ceiling, a wall, and any combinations thereof.
8. The method according to claim 1, further comprising capturing a plurality of said first frames and a plurality of said second frames wherein said relative position in between said first camera and said second camera is based in part on said pluralities of said first and said second frames.
9. The method according to claim 6, further comprising generating a single synthetic image from said plurality of first and second frames.
10. A method for calibrating cameras comprising :
moving a point of light;

generating a first frame when said point of light is a first field of view of a first camera; generating a second frame when said point of light is in a second field of view of a second camera; said first field of view and said second field of view do not overlap; and

capturing data from said first and said second frames, said data includes a first time of said first frame and a second time of said second frame;

determining a relative position between said first and said second cameras based at least in part on said first and said second times.

11. The method according to claim 10, further comprising dividing said point of light into a plurality of points of light prior to moving said points of light.
12. The method according to claim 10, wherein said point of light is moved on a flat surface selected from the group consisting of a floor, a ceiling or a wall, or any combination thereof.
13. The method according to claim 10, further comprising manipulating said first and said second frames to generate a synthetic image of said flat surface.
14. The method according to claim 13, wherein said synthetic image is a three dimensional object.
15. A system for calibrating a first camera and a second camera with respect to one another, comprising:
 - a light source for generating a point of light on a surface;
 - means for moving said point of light through a predefined path, said path being definable through a field of view of the said first and said second cameras;
 - and

a controller connectable to the first and second cameras so that said controller can capture a first frame from said first camera when said predefined path is within a first field of view of said first camera and a second frame from said second camera when said predefined path is within a second field of view of said field of view the second camera, said controller being configured to determine an angle of the first camera with respect to the second camera based at least in part on said first and second frames.

16. The system according to claim 15, wherein said first field of view and said second field of view do not overlap.
17. The system according to claim 15, wherein said light source is capable of generating multiple points of light.
18. The method according to claim 15, wherein said point of light is located on a second flat surface that is perpendicular to said first flat surface.
19. The method according to claim 15, wherein said controller is capable of manipulating said first and said second frames to generate a synthetic image of said first flat surface.
20. The method according to claim 19, wherein said controller is capable of manipulating said synthetic image.

21. The method according to claim 15, wherein said means for moving is selected from the group consisting of a means for rotating, a means for changing a camera angle with respect to said flat surface, and any combinations thereof.